



George C. Marshall Space Flight Center  
Marshall Space Flight Center, Alabama 35812

**QD-A-006**

**REVISION: D**

**EFFECTIVE DATE: December 14, 2005**

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# **ORGANIZATIONAL INSTRUCTION**

## **Professional Development Roadmap (PDRM) for Safety and Occupational Health Specialists**

**OPR(s)**

**All QD Departments**

**OPR DESIGNEE**

**Judy Milburn**

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## DOCUMENT HISTORY LOG

Status (Baseline/ Revision/ Canceled)	Document Revision	Effective Date	Description
Baseline	Baseline	05/12/04	New document.
Revision	A	10/15/04	Revised to bring document in compliance with the HQ Rules Review Action (CAITS: 04-DA01-0387). Changes were also made to reflect S&MA organizational name changes (i.e., QS to QD).
	B	12/6/04	Administrative change – removed Apprentice as a qualification
	C	1/25/04	Expanded scope of IDP. The following was added: Chart with key lines of responsibilities and its interaction between Discipline Champion, Department Manager, Mentor and the Individual. Role of Mentor and Mentee and their roles and responsibilities as part of PDRM. Details added of Discipline Working Group Team Meeting and perquisite to keep current on respective PDRM. Also, changed MPG's to MPR's as required by Headquarters. Change some Department Manager functions to Safety & Occupational Health Specialist Champion.
	D	11/08/05	Statement added in paragraph 4.2.7 that minimum requirements completion level for any of the PDRM requirements is 70 to 80 % in all three levels (Training, Reference Materials and OJT) (as applicable) to the level individual is being qualified. Revised training requirements under Appendix A: Novice Qualification Requirements (Overhead Crane and Explosive Safety). Revised number of pre-constructions conferences required for On-the-Job Training under Appendix A: Novice Qualifications. Removed requirement for Overhead Crane Training (NSTC 205) in Appendix B.

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## Professional Development Roadmap for Marshall Space Flight Center (MSFC) Safety and Mission Assurance (S&MA) Safety & Occupational Health Specialists

### 1. PURPOSE, SCOPE, APPLICABILITY

1.1. Purpose – This Organizational Instruction (OI) establishes a voluntary training and development roadmap for Safety and Occupation Health Specialists within the Marshall Space Flight Center (MSFC) Safety and Mission Assurance (S&MA) Directorate. This OI identifies the minimum level of training, knowledge, and skills that a Safety & Occupational Health Specialist shall acquire in developing their safety discipline expertise.

1.2. Scope – This OI shall serve as a development roadmap for Safety & Occupational Health Specialists who support the MSFC Safety, Health, & Environmental (SHE) Program. It provides a comprehensive list of training, knowledge requirements, and on-the-job (OJT) experience needed by MSFC S&MA Safety & Occupational Health Specialists to effectively execute their duties.

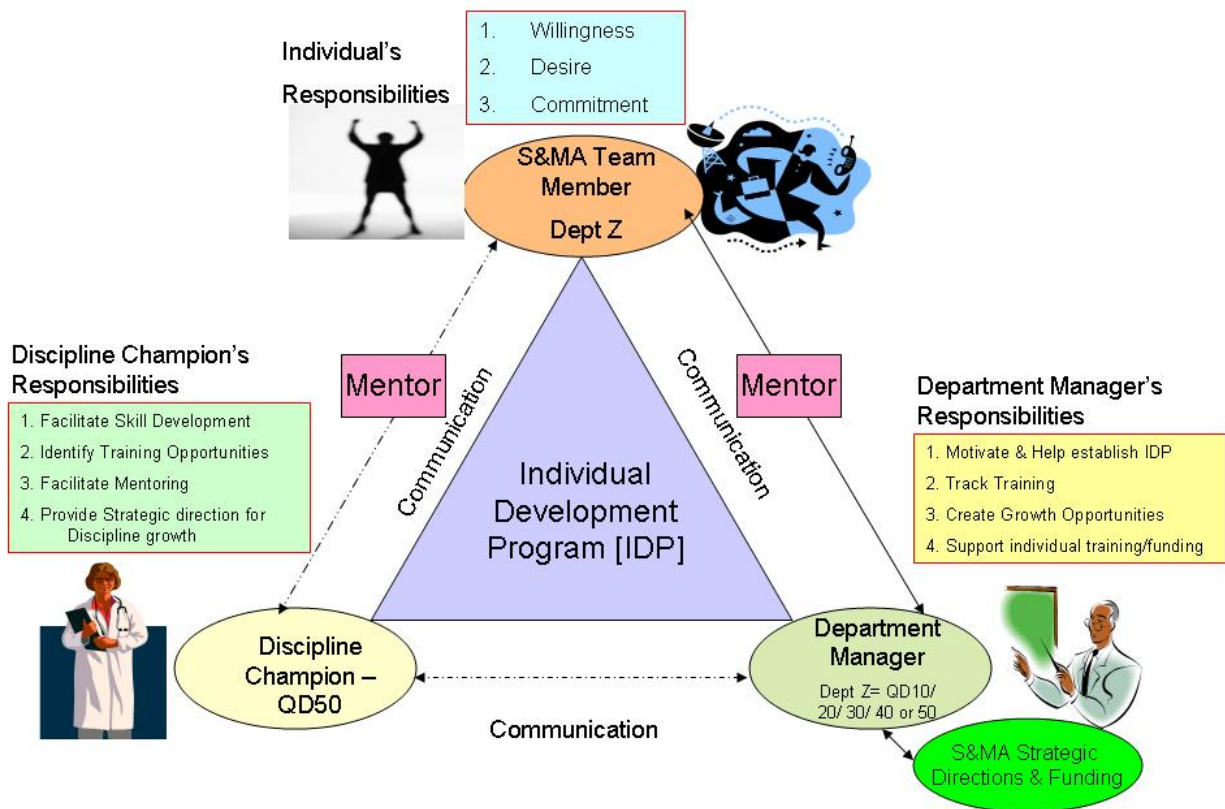
This roadmap establishes three qualification levels (Novice, Journeyman and Expert), and provides a process for progressive qualification at each level.

This roadmap shall be used in conjunction with Individual Development Plans (IDP) to encourage Safety & Occupational Health Specialists to pursue development activities most appropriate to their specialty. The intent is to use the roadmap to **guide** the development of IDPs for S&MA Safety & Health Occupational Health Specialists.

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**Figure 1.2 Key Lines of Responsibilities**

### S&MA PDRM – Key Lines of Responsibilities



1.3. Applicability – This OI applies to all MSFC S&MA personnel who seek to provide S&MA Safety & Occupational Health Specialist services, including in-house and offsite, and who choose to participate. Personnel shall satisfy the prerequisites specified in Appendix A before participating in this roadmap process. Mission Support Contractor personnel are also encouraged to participate in this voluntary program, or in a tailored mission support contractor program approved by the MSFC S&MA Director.

## 2. DOCUMENTS

### 2.1. Applicable Documents

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- 2.1.1 MPR 3410.1 Training
- 2.1.2 MWI 3410.1 Personnel Qualification Program
- 2.1.3 Individual Development Plan Instruction (Being revised)
- 2.1.4 NPR 1441.1, NASA Records Retention Schedule (NRRS)

### 3. DEFINITIONS AND ACCRONYMS

3.1 Professional Development Roadmap (PDRM) – instrument to identify and document the minimum training, knowledge requirements and on-the-job (OJT) experience needed by MSFC S&MA personnel at three levels of their discipline expertise development.

3.2 Individual Development Plan (IDP) – a document developed jointly by the employee and their supervisor to plan the employee’s training and development needs as well as to identify possible training solutions. The plan focuses on immediate and short-term goals that are in line with the longer-term goals of both the employee and the organization. The IDP focuses on enhancing the competencies the employee needs to improve the Center’s, and ultimately, the Agency’s effectiveness.

3.3 Qualification – the act of verifying and documenting that personnel have completed required training, and have demonstrated specified proficiency.

3.4 Qualification Levels – are defined as:

- Novice: The lowest recognizable level (Appendix A).
- Journeyman: Intermediate level of expertise (Appendix B).
- Expert: The highest level of expertise (Appendix C).

3.5 Qualification Criteria – are specified in Appendix A (Novice), Appendix B (Journeyman) and Appendix C (Expert) and include three categories of accomplishments that demonstrate discipline expertise:

- Training – traditional classroom, online and computer based.
- Reference documents – demonstrating understanding.
- On the Job training (OJT) – demonstrating specific skills.

3.6 Prerequisites – requirements to be satisfied prior to participating in this PDRM process are specified in Appendix A.

3.7 Application for Qualification: - submitted by the candidate seeking qualification upon completion of the requirements for each level. Application consists of:

- Completed and approved application Form (Appendix D).
- Completed and approved copy of Appendix A (for Novice qualification), Appendix B (for Journeyman qualification), or Appendix C (for Expert qualification).

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3.8 Implementation Requirements – specific actions required to initially implement this OI. (See section 4.1).

3.9 Qualification of Experienced Personnel – are earned by documenting candidate’s previously completed training and development. (See section 4.3).

3.10 Qualification by Designation (Grandfathering) – Qualification achieved prior to completion of the required PDRM line items. This is done only during initial process implementation stages to create a discipline Champion and Mentors. Personnel qualified in this manner are expected to document their qualifications as soon as possible thereafter. (See section 4.4).

3.11 Equivalent Training Criteria – are training classes or experiences substituted for those specified in the Appendices. During the initial stages of the program, or when new employees are transferred into S&MA, previously completed items can be substituted with approval of the Discipline Champion. Thereafter, the Champion must approve all equivalent criteria in advance.

3.12 Personnel and Roles – required to implement this OI are defined below:

3.12.1 Candidate – a civil service employee or mission support contractor who seeks qualification via the PDRM process.

3.12.2 Supervisor – the organizational line manager who provides supervisory functions and responsibilities for employee positions requiring training and/or qualification. The supervisor helps create, and approve, the candidate’s IDP, verifies completion of the OJT requirements, and recommends the candidate for qualification.

3.12.3 Mentor/Mentee – Is the relationship between a person already qualified to a discipline level and a person seeking qualification to that level.

3.12.3.1 Mentor – is an experienced Safety & Occupational Health Specialist who is selected as, and who agrees to perform as, a coach to the candidate in the PDRM qualification process. Mentors are also responsible for verifying a candidates understanding of the required reference documents.

Mentors are normally required to be qualified at least at the Journeyman Level (Expert Level if mentoring a candidate for Expert qualification).

A Safety & Occupational Health Specialist who does not meet the qualification requirement, but who has extensive and relevant experience, may be approved to serve as Mentor on a case-by-case basis. This exception requires approval by the candidate’s supervisor and the Discipline Champion.

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3.12.3.2 Mentee is a candidate who is working with a mentor to achieve the next higher level of qualification in his/her declared discipline. Mentee responsibilities include:

- Discussing your ideas, goals, aspirations and plan for action with your mentor and your supervisor as appropriate.
- Preparing an Individual Development Plan (IDP) that identifies:
  - Developmental objectives
  - Necessary training courses as well as on-the-job (OJT) training
- Identifying and coordinating with your mentor and supervisor developmental objectives that are specific, measurable, achievable, and compatible with the PDRM.
- Reaching consensus with your mentor and supervisor on an IDP.
- Accepting responsibility for accomplishment of both your current job and IDP requirements.
- Seeking advice from your mentor on organizational norms and expectations as appropriate.
- Reaching agreement with your mentor on a schedule of regular mentor/mentee meetings.
- Seeking feedback from your mentor and others regarding your strengths and additional developmental needs.

3.12.4 Safety & Occupational Health Specialist Champion – an individual recognized as a key leader in the Safety & Occupational Health Specialist discipline, and is designated by the S&MA Director (or his/her designee). The Champion is responsible for the technical content of this PDRM, approval or any “equivalent” criteria, selecting and training Mentors, and participation in the Qualification Review Board.

3.13 Qualification Review Board – is responsible for reviewing and approving qualification applications. The Board consists of the S&MA Director (or his/her designee), the Safety & Occupational Health Specialist Champion, and other key individuals selected by the S&MA Director. The Board reviews and approves any changes to this OI.

3.14 PDRM Designation Memorandum – a document signed by the Director of S&MA that identifies S&MA personnel authorized to serve as Safety & Occupational Health Champion, Mentors, and Qualification Review Board members.

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#### 4. INSTRUCTIONS

4.1 Implementation Requirements – Implementation of this OI shall begin upon approval by the S&MA Director, and requires the following additional actions:

- Selecting Safety and Occupational Health Specialist discipline Mentors, and designating (grandfathering) them to be qualified at the Journeyman or Expert level.
- Appointing Qualification Review Board Members.
- Publishing the PDRM Designation Memorandum.
- Authorizing and initiating a work task for the Safety & Occupational Health Specialist Champion and/or Mentors to prepare a set of checklists and sample questions to be used as guidelines for demonstrating candidate knowledge of the reference documents.
- Formalizing and baselining the in-house courses identified in the appendices that are currently taught informally by NASA employees and mission support contractors
- Communicating to all S&MA personnel the existence, purpose, expectations, process and names of key personnel associated with this OI.

4.2 Qualification Process (Normal) - A candidate seeking qualification shall use the following process. This process is further illustrated in the flow chart in Section 11.

4.2.1 Candidate declares his/her S&MA specialty as Safety & Occupational Health Specialist. The candidate's Supervisor approves this decision.

4.2.2 Candidate documents completion of prerequisites using a completed copy of the application form (Appendix D).

4.2.3 Supervisor assigns a Mentor (with support from the Safety & Occupational Health Specialist Champion).

4.2.4 Apprentice works with his/her Supervisor to develop an IDP which includes appropriate items from the PDRM (Appendix A).

4.2.5 Apprentice pursues the required developmental activities per the PDRM and IDP.

4.2.6 Upon completion of each developmental activity, the Apprentice obtains the proper signature on the PDRM (Appendix A) as shown in the following table:



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Criteria Type	Required Activity	Verifying Signature
Training Classes	Complete successfully	Class Certificate
Reference Documents	Demonstrate understanding	Mentor
OJT Experiences	Complete successfully	Supervisor

4.2.7 Upon completion and documentation of all required activities for qualification, the S&MA employee completes the application form, obtains the signature of the respective Discipline Champion and submits the completed package to his/her Supervisor for further processing at PDRM Qualification Board. Note: It is not necessary to complete 100% of the items listed in Appendix A, B, or C, but S&MA employee must meet a minimum of 70% to 80% completion on all required activities, especially listed for their designated qualification (Training, Reference Materials and On the Job Training at all applicable levels). When the candidate, with the concurrence of the Mentor and Safety & Occupational Health Specialist Champion, has completed a sufficient amount of the Appendix A, B, or C items to become qualified, he/she may submit the package to his/her Supervisor for concurrence and further processing.

4.2.8 Supervisor approves the application and forwards it to the S&MA Director for action by the Qualification Review Board.

4.2.9 The Qualification Review Board reviews the application, and makes the approval decision.

4.2.10 A Novice earns Journeyman qualification by continuing the above process using Appendix B.

4.2.11 A Journeyman earns Expert qualification by continuing the above process using Appendix C.

4.3 Qualification of Experienced Personnel - Existing S&MA personnel and new personnel hired/transferred into S&MA, who are experienced in the industrial safety discipline, may seek qualification at any level for which they qualify by documenting their previously completed achievements and using the following process. This process is further illustrated in the flow chart in Section 11.

4.3.1 Candidate documents previously completed training classes and OJT achievements on the appropriate appendices (e.g. a candidate applying for Safety & Occupational Health Specialist Expert qualification are required to complete Appendix A, B and C):

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- Equivalent training and experiences can be substituted for the criteria specified in the appendix with the approval of the Discipline Champion.
- The Discipline Champion verifies training classes. Candidates are responsible for providing proof (e.g. copies of certificates, grade reports and/or transcripts) of non-NASA training to the Training Department.
- OJT shall be verified by signature of the Champion.

4.3.2 Candidate shall demonstrate his/her understanding of the reference documents using the normal qualification process (See section 4.2).

4.3.3. Upon completion and documentation of all required activities for qualification, the candidate completes the application form (Appendix D), obtains Discipline Champion approval and submits the package to his/her Supervisor for approval. Note: It is not necessary to complete 100% of the items listed in Appendix A. When the candidate, with the concurrence of the Mentor and Safety & Occupational Health Specialist Champion, has completed a sufficient amount of the Appendix to become qualified, he/she may submit the package to his/her Supervisor for concurrence.

4.3.4 Supervisor approves the application and forwards it to the Qualification Review Board for action.

4.3.5. The Qualification Review Board reviews the application and makes the approval decision.

4.4 Qualification by Designation (Grandfathering) – During the initial PDRM process implementation, the S&MA Director (or his/her designee) shall qualify the Safety & Occupational Health Champion and Mentors prior to their completion of the PDRM application. Any personnel so qualified are expected to document their qualifications per the PDRM process for experienced personnel (section 4.3) as soon as possible thereafter.

4.5 Maintaining Qualification - It is expected that personnel qualification at the Expert level shall (1) continue training (at least 40 hours per year in their discipline) and (2) continue to perform OJT activity at the level described in Appendix C, and (3) actively participate in the monthly system safety team meetings.

4.6 PDRM Team Meetings - Personnel who declare Safety & Occupational Health Specialist as their core discipline, shall be expected to attend their respective team meetings unless assigned project duties do not allow participation. (If assigned duties do conflict with the scheduled team meetings, personnel shall notify their champion.) The main goal of this meeting is to improve the quality, consistency and effectiveness of S&MA discipline expertise as it is implemented across all projects at MSFC.

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These meetings shall provide a forum for team members to exchange information and ideas with other personnel involved in their discipline, and to stay current with the latest policies, techniques and findings for the discipline. Team meetings shall be used to inform participants of future training opportunities and to discuss any individual training needs. Participants shall discuss activities within their assigned projects that may have relevance or interest to other team members.

The respective PDRM Discipline Champion shall be responsible for conducting the team meetings, including establishing an agenda, finding appropriate facilities, and making any special arrangements, as needed, for the meetings. All other team members shall actively participate in meetings and present items of interest when requested.

4.6.1 Pre-requisite to meet PDRM Qualification level: To remain current in the qualification process, personnel shall participate in at least 6 team meetings annually, or provide rationale to their supervisor/Champion explaining the reason that they were not able to attend at least 6 team meetings in a 12 month period.

4.7 Process Measurement – shall be accomplished by baselining the number of personnel qualified at each level, and thereafter measuring the progress toward advanced qualification by S&MA personnel. The baseline shall be created 6 months after implementation. Measurements shall be made semi-annually thereafter. Each semi-annual measurement shall determine the percentage of S&MA personnel qualified, and estimate the progress (percent complete) of each participating individual toward the next higher qualification. Department Managers shall report this measurement at the next scheduled Monthly Status Review.

Team member participation in the respective PDRM team meetings shall be documented by the Discipline Champion and reported to S&MA management on a monthly basis and tracked by the respective Supervisors and Managers. Personnel shall attend a minimum of 6 team meetings annually to remain active in the respective qualification process.

4.8 Amendments – Changes to this Organizational Instruction are made per the documented Organizational Instruction Change Process. The Qualification Review Board shall review proposed changes to this PDRM prior to submitting them to the MSFC Director of S&MA for approval. The custodial responsibility for this PDRM shall be assigned to the Industrial Safety Department (QD50).

## 5. NOTES

5.1. OI Replacement – QD-A-006 dated January 25, 2005.

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## 6. SAFETY PRECAUTIONS AND WARNING NOTES

None

## 7. APPENDICES, DATA, REPORTS, AND FORMS

- A – PDRM for Safety & Occupational Health Specialist: Novice
- B – PDRM for Safety & Occupational Health Specialists: Journeyman
- C – PDRM for Safety & Occupational Health Specialists: Expert
- D – Qualification Application Form

## 8. RECORDS

<u>Record</u>	<u>Repository</u>	<u>Period of Time</u>
Completed PDRM (Official Course completion information shall be kept by the MSFC Training Office)	S&MA Training Officer	Maintained in accordance with NRRS 3/33 (G.2) destroy 5 years after separation of employee or when no longer needed. (Documentation of the appropriate PDRM is maintained by the MSFC Training Office.)

## 9. TOOLS, EQUIPMENT, AND MATERIALS

None

## 10. PERSONNEL TRAINING REQUIREMENTS

See Appendix A - C

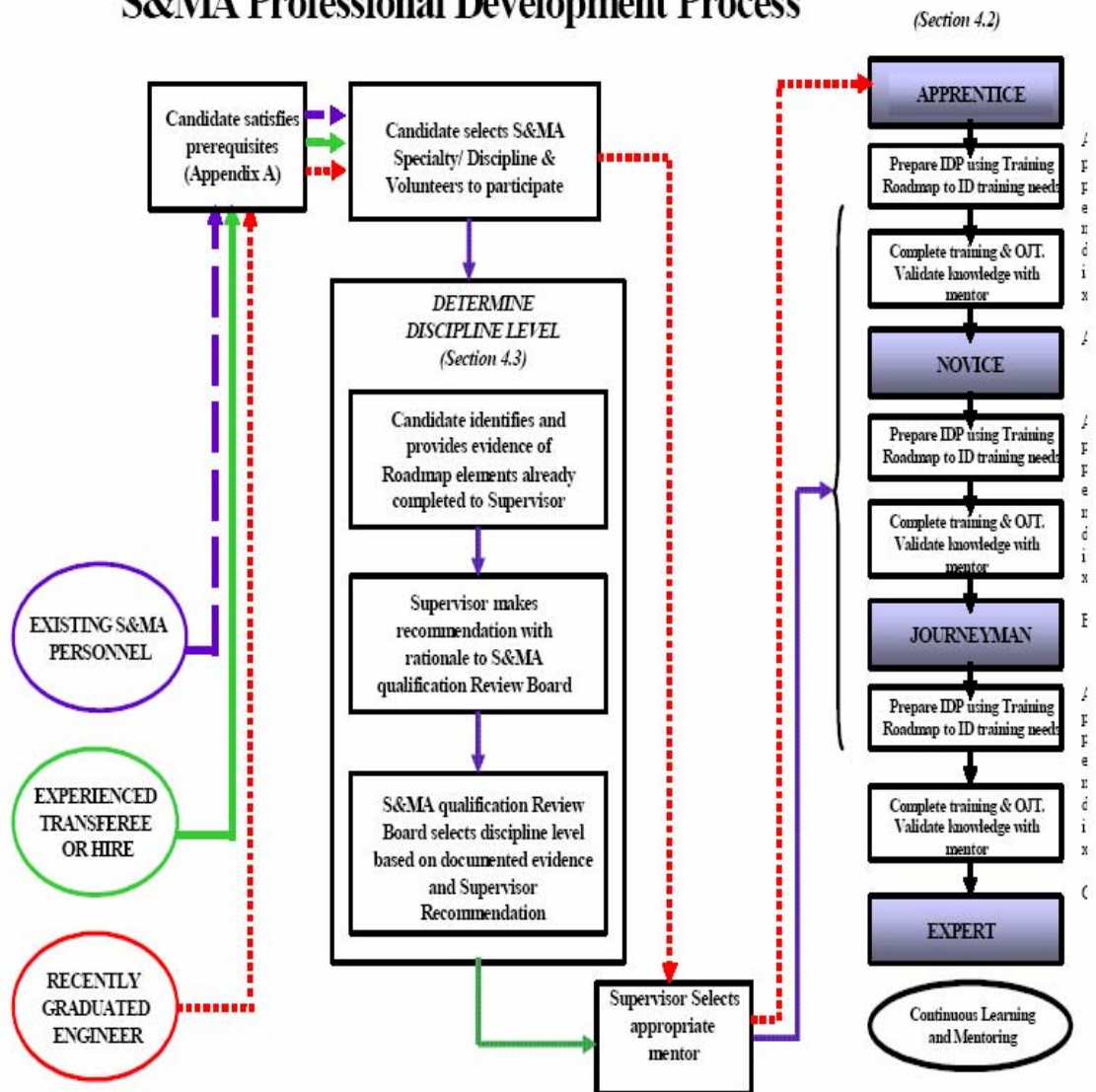
## 11. FLOW DIAGRAM

The flow diagram (Figure 11-1) illustrates the PDRM qualification process described in this OI.

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Figure 11-1

## S&MA Professional Development Process



Notes:

1. Qualification Review Board is the decision authority for qualification levels and approvals.

## **APPENDIX A: NOVICE Qualification Requirements**

### **A.1 Objective:**

This Appendix provides the qualification criteria for Safety and Occupational Health Specialist to be qualified at the Novice level, using the process described in the body of the Organization Instruction.

### **A.2 Prerequisites:**

Prior to beginning the process, the candidate satisfies the following prerequisites:

1. Candidate must meet the qualification standards listed in the United States Office of Personnel Management (OPM) General Schedule Position, GS-018: Safety and Occupational Health Management Series.
2. Candidate must volunteer to participate in the PDRM qualification program, and obtain approval of his/her immediate supervisor.

### **A.3 Experience:**

Candidates are to have at least 1 to 3 years of relevant experience in the discipline prior to earning the Novice Qualification.

## APPENDIX A: NOVICE Qualification Requirements

<b>TRAINING CLASS REQUIREMENTS</b> <b>Equivalent classes can be substituted with approval by the Discipline Champion.</b>		<b>Champion SIGNATURE/ DATE COMPLETE</b>
MSFC Safety Culture Training (MSCT)		<div>_____</div> <div>Signature Date</div>
SHE Program Video (700V115001)		<div>_____</div> <div>Signature Date</div>
General Industry Safety and Health (NSTC 501)		<div>_____</div> <div>Signature Date</div>
Fall Protection (NSTC 311)		<div>_____</div> <div>Signature Date</div>
Scaffolding Safety (NSTC 312)		<div>_____</div> <div>Signature Date</div>
Confined Space (NSTC 806) or MSFC Confined Space		<div>_____</div> <div>Signature Date</div>
Lockout/Tagout (NSTC 814)		<div>_____</div> <div>Signature Date</div>
Aerial Platform (NSTC 030)		<div>_____</div> <div>Signature Date</div>
Machinery and Machine Guarding (NSTC 204)		<div>_____</div> <div>Signature Date</div>
Forklift Safety (NSTC 209)		<div>_____</div> <div>Signature Date</div>
Mobile Crane Safety (NSTC 208)		<div>_____</div> <div>Signature Date</div>
Life Safety Code (NSTC 217)		<div>_____</div> <div>Signature Date</div>
OSHA 200 Construction Safety Standards (NSTC 200)		<div>_____</div> <div>Signature Date</div>
Cryogenics Safety (NSTC 313)		<div>_____</div> <div>Signature Date</div>

## APPENDIX A: NOVICE Qualification Requirements

<b>TRAINING CLASS REQUIREMENTS</b> <b>Equivalent classes can be substituted with approval by the Discipline Champion.</b>		<b>Champion SIGNATURE/ DATE COMPLETE</b>
Overhead Cranes and Material Handling (NSTC 205)		_____ Signature Date
Basic Explosives Safety (NSTC 082)		_____ Signature Date
Electrical Safety Standards (NSTC 309)		_____ Signature Date
High Pressure Systems Safety (NSTC 315)		_____ Signature Date
Laboratory Safety and Health (NSTC 224)		_____ Signature Date
Root Cause Analysis (NSTC 049)		_____ Signature Date
Flexhose Safety (NSTC 056)		_____ Signature Date
Occupational Ergonomics (NSTC 225)		_____ Signature Date
Business Writing for Results (BWFR) (1 Day - MSFC)		_____ Signature Date
Communicating with Impact and Power GEN0029 - (1Day - MSFC)		_____ Signature Date
Improve Your On-the-Job Listening and Speaking Skills (ILSS) (4 Hours – MSFC)		_____ Signature Date
How to Deal With Difficult People GEN0019 - (1 Day – MSFC)		_____ Signature Date
Focusing on Change in the Workplace (FCW) - (1 Day – MSFC)		_____ Signature Date



## APPENDIX A: NOVICE Qualification Requirements

REFERENCE MATERIALS Demonstrate familiarity (Note 1) with key concepts as defined by the Discipline Champion		Champion SIGNATURE/ DATE COMPLETE
NPR 8715.1: NASA Safety & Health Handbook – Occupational Safety & Health Programs		_____ Signature Date
NPR 8715.3: NASA Safety Manual		_____ Signature Date
NPD 8710.2: NASA Safety & Health Policy		_____ Signature Date
NPR 8621.1: NASA Procedural Requirements for Mishap Reporting, Investigation, and Recordkeeping		_____ Signature Date
MPR 8715.1: Safety, Health & Environmental (SHE) Program		_____ Signature Date
MWI 8715.1: Electrical Safety		_____ Signature Date
MWI 8715.2: Lockout/Tagout Program		_____ Signature Date
MWI 8715.3: Hazard Warning Signs & Barricades		_____ Signature Date
MWI 8715.4: Personal Protective Equipment		_____ Signature Date
MWI 8715.15: Ground Operations Safety Assessment and Risk Mitigation Program		_____ Signature Date
MWI 8715.9: Occupational Safety Guidelines for MSFC Contractors		_____ Signature Date
MWI 8715.10: Explosives, Propellant, & Pyrotechnics Program		_____ Signature Date
MWI 8715.11: Fire Safety Program		_____ Signature Date
MWI 8715.13: Safety Concerns Reporting System		_____ Signature Date

## APPENDIX A: NOVICE Qualification Requirements

REFERENCE MATERIALS Demonstrate familiarity (Note 1 & 2) with key concepts as defined by the Discipline Champion		Champion SIGNATURE/ DATE COMPLETE
MWI 8715.16: Supervisor's Safety Visits		_____ Signature _____ Date
MWI 3410.1: Personnel Certification Program		_____ Signature _____ Date
MWI 8621.1: Close Call and Mishap Reporting and Investigation Program		_____ Signature _____ Date
MWI 1280.5: Alert Processing		_____ Signature _____ Date
MWI 1700.3: NASA Safety Reporting Systems Corrective Action		_____ Signature _____ Date
MPR 1040.3: MSFC Emergency Plan		_____ Signature _____ Date
29 CFR 1910: Occupational Safety & Health Administration (OSHA): General Industry		_____ Signature _____ Date
29 CFR 1926: OSHA Construction		_____ Signature _____ Date
29 CFR 1960: OSHA Federal Programs		_____ Signature _____ Date
National Fire Codes (NFC)		_____ Signature _____ Date
American National Standards Institute (ANSI)		_____ Signature _____ Date
SHE Web Page & Applications (Note 3)		_____ Signature _____ Date

Notes:

1. \*Familiarity with key concepts - employee shall have a basic knowledge of the documents listed below, and be able to answer questions to demonstrate they have attained this knowledge (i.e., "What document provides the procedures and guidelines that defines the NASA Safety Program?" NPG 8715.3).
2. Champion is responsible for identifying specific level of understanding required (See section 4)

## APPENDIX A: NOVICE Qualification Requirements

3. Demonstrate a working knowledge of major safety and health software applications (i.e., Safety Concerns Reporting System (SCRS), Safety Observation Survey (SOS), SHEtrak, IHOPS, etc.).

ON THE JOB TRAINING Complete the following activities (Note 1)		Champion SIGNATURE/ DATE COMPLETE
Assist in conducting at least 10 fire drills.		_____ Signature Date
Participate in at least 30 facility safety inspections.		_____ Signature Date
Assist in at least 10 final acceptance inspections.		_____ Signature Date
Assist in issuing at least 10 burn permits.		_____ Signature Date
Assist in the review of at least 5 confined space permits.		_____ Signature Date
Assist in reviewing and commenting on at least 10 contractor safety and health plans.		_____ Signature Date
Assist in investigating, documenting, reporting, and following-up on at least 10 mishaps.		_____ Signature Date
Assist in investigating and processing at least 10 SCRS reports.		_____ Signature Date
Attend at least 5 meetings of the SHE Committee, Marshall Team Meeting, or SHE Subcommittees.		_____ Signature Date
Attend at least 5 pre-construction conferences.		_____ Signature Date
Assist in at least 20 customer visits conducted by a JSS.		_____ Signature Date
Assist in the full process of preparing at least 5 Safety Bulletins, from initial investigation and reporting, through review of data and drafts to preparation of complete drafts.		_____ Signature Date
Observe at least 5 safety presentations on at least 3 different topics.		_____ Signature Date

## **APPENDIX A: NOVICE Qualification Requirements**

Notes:

1. Candidates work with his/her Champion to identify specific applicable assignments. Department Manager can be consulted to ensure proposed assignments satisfy the qualification requirements.

## **APPENDIX B: JOURNEYMAN Qualification Requirements**

### **B.1 Objective:**

This Appendix provides the qualification criteria for Safety and Occupational Health Specialists to be qualified at the Journeyman level, using the process described in the body of the Organization Instruction.

### **B.2 Prerequisites:**

Prior to beginning the process, the candidate is required to be qualified as a Novice Safety and Occupational Health Specialist per the requirements in Appendix A. The candidate shall participate in at least 6 discipline team meetings annually to qualify as a Journeyman to maintain that qualification level.

### **B.3 Years of Experience:**

Candidates are required to have at least 3 to 5 years of relevant experience in the discipline prior to being qualified at the Journeyman level.

## APPENDIX B: JOURNEYMAN Qualification Requirements

<b>TRAINING CLASS REQUIREMENTS</b> <b>Equivalent classes can be substituted with approval by the Discipline Champion.</b>		<b>Champion SIGNATURE/ DATE COMPLETE</b>
MORT-Based Mishap Investigation (NSTC 006)		_____ Signature _____ Date
Hazard & Operability Analysis (HAZOP) (NSTC 828)		_____ Signature _____ Date
Fire Protection Theory and Practice (NSTC 207)		_____ Signature _____ Date
Liquid Nitrogen Handler's Course (NSTC 314)		_____ Signature _____ Date
Fire Hazards in Oxygen Systems, Presented by ASTM (FHOS)		_____ Signature _____ Date
Explosive Safety Engineering or equivalent (i.e. AMTEC) (NSTC 007)		_____ Signature _____ Date
Battery Safety (NSTC 036)		_____ Signature _____ Date
Explosive Handler's (NSTC 009)		_____ Signature _____ Date
Facility System Safety (NSTC 001)		_____ Signature _____ Date
System Safety Fundamentals (NSTC 002)		_____ Signature _____ Date
Situational Awareness (NSTC 034)		_____ Signature _____ Date
Hydrogen Safety (NSTC 037)		_____ Signature _____ Date
<b>TRAINING CLASS REQUIREMENTS</b> <b>Equivalent classes can be substituted with approval by the Discipline</b>		<b>Champion SIGNATURE/ DATE COMPLETE</b>

## APPENDIX B: JOURNEYMAN Qualification Requirements

<b>Champion.</b>		
Hypergol Safety (NSTC 040)		_____ Signature Date
Safety in High Pressure Operations (NSTC 317)		_____ Signature Date
Make Meetings Work GEN0025 - (5 Days - MSFC)		_____ Signature Date
Effective Briefings GEN0024 - (5 Days - MSFC)		_____ Signature Date
Interpersonal Communication: Developing Effective Relationships (3 Days – MSFC) (ICSK)		_____ Signature Date
How to Make Presentations With Confidence and Power (HTMPWCP) (1Day - MSFC)		_____ Signature Date

<b>REFERENCE MATERIALS</b> Demonstrate working knowledge with contents as defined by the Discipline		<b>Champion SIGNATURE/ DATE COMPLETE</b>
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## APPENDIX B: JOURNEYMAN Qualification Requirements

<b>Champion</b>		
NPR 8715.1: NASA Safety & Health Handbook – Occupational Safety & Health Programs		_____ Signature                      date
NPR 8715.3: NASA Safety Manual		_____ Signature                      date
NPD 8710.2: NASA Safety & Health Policy		_____ Signature                      date
NPR 8621.1: NASA Procedural Requirements for Mishap Reporting, Investigation, and Recordkeeping		_____ Signature                      Date
MPR 8715.1: Safety, Health & Environmental (SHE) Program		_____ Signature                      date
MWI 8715.1: Electrical Safety		_____ Signature                      date
MWI 8715.2: Lockout/Tagout Program		_____ Signature                      date
MWI 8715.3: Hazard Warning Signs & Barricades		_____ Signature                      date
MWI 8715.4: Personal Protective Equipment		_____ Signature                      date
MWI 8715.15: Ground Operations Safety Assessment and Risk Mitigation Program		_____ Signature                      date
MWI 8715.9: Occupational Safety Guidelines for MSFC Contractors		_____ Signature                      date
MWI 8715.10: Explosives, Propellant, & Pyrotechnics Program		_____ Signature                      date
MWI 8715.11: Fire Safety Program		_____ Signature                      date
MWI 8715.13: Safety Concerns Reporting System		_____ Signature                      date
<b>REFERENCE MATERIALS</b> Demonstrate working knowledge with contents as defined by the Discipline		<b>Champion SIGNATURE/ DATE COMPLETE</b>



## APPENDIX B: JOURNEYMAN Qualification Requirements

<b>Champion</b>		
MWI 8715.16: Supervisor's Safety Visits		_____ Signature date
MWI 3410.1: Personnel Certification Program		_____ Signature date
MWI 8621.1: Close Call and Mishap Reporting and Investigation Program		_____ Signature date
MWI 1280.5: Alert Processing		_____ Signature date
MWI 1700.3: NASA Safety Reporting Systems Corrective Action		_____ Signature date
MPR 1040.3: MSFC Emergency Plan		_____ Signature date
29 CFR 1910: Occupational Safety & Health Administration (OSHA): General Industry		_____ Signature date
29 CFR 1926: OSHA Construction		_____ Signature date
29 CFR 1960: OSHA Federal Programs		_____ Signature date
National Fire Codes (NFC)		_____ Signature date
American National Standards Institute (ANSI)		_____ Signature date

### Notes:

1. Champion is responsible for identifying specific level of understanding required for each document. (See section 4.1).

## APPENDIX B: JOURNEYMAN Qualification Requirements

<b>ON THE JOB TRAINING</b> <b>Complete the following activities in any sequence (Note 1 &amp; 2)</b>		<b>Champion SIGNATURE/ DATE COMPLETE</b>
Under appropriate supervision, satisfactorily conduct at least 5 fire drills.		<div style="display: flex; justify-content: space-between;"> <div>_____</div> <div>_____</div> </div> <div style="display: flex; justify-content: space-between;"> <div>Signature</div> <div>Date</div> </div>
Under appropriate supervision, conduct at least 20 annual facility safety inspections.		<div style="display: flex; justify-content: space-between;"> <div>_____</div> <div>_____</div> </div> <div style="display: flex; justify-content: space-between;"> <div>Signature</div> <div>Date</div> </div>
Under appropriate supervision, conduct at least 5 final acceptance inspections.		<div style="display: flex; justify-content: space-between;"> <div>_____</div> <div>_____</div> </div> <div style="display: flex; justify-content: space-between;"> <div>Signature</div> <div>Date</div> </div>
Under appropriate supervision, issue 5 burn permits.		<div style="display: flex; justify-content: space-between;"> <div>_____</div> <div>_____</div> </div> <div style="display: flex; justify-content: space-between;"> <div>Signature</div> <div>Date</div> </div>
Under appropriate supervision, review and concur in at least 5 confined space permits.		<div style="display: flex; justify-content: space-between;"> <div>_____</div> <div>_____</div> </div> <div style="display: flex; justify-content: space-between;"> <div>Signature</div> <div>Date</div> </div>
Under appropriate supervision, review and comment on at least 5 contractor safety and health plans.		<div style="display: flex; justify-content: space-between;"> <div>_____</div> <div>_____</div> </div> <div style="display: flex; justify-content: space-between;"> <div>Signature</div> <div>Date</div> </div>
Under appropriate supervision, conduct at least 5 Mishap Reports, including the resolution of any identified deficiencies.		<div style="display: flex; justify-content: space-between;"> <div>_____</div> <div>_____</div> </div> <div style="display: flex; justify-content: space-between;"> <div>Signature</div> <div>Date</div> </div>
Under appropriate supervision, review, investigate, and process at least 10 SCRS reports through approval for closure.		<div style="display: flex; justify-content: space-between;"> <div>_____</div> <div>_____</div> </div> <div style="display: flex; justify-content: space-between;"> <div>Signature</div> <div>Date</div> </div>
Participate in at least 5 meetings of the SHE Committee, Marshall Team Meeting, or SHE Subcommittees.		<div style="display: flex; justify-content: space-between;"> <div>_____</div> <div>_____</div> </div> <div style="display: flex; justify-content: space-between;"> <div>Signature</div> <div>Date</div> </div>
Under appropriate supervision, conduct at least 5 pre-construction conferences.		<div style="display: flex; justify-content: space-between;"> <div>_____</div> <div>_____</div> </div> <div style="display: flex; justify-content: space-between;"> <div>Signature</div> <div>Date</div> </div>
Under appropriate supervision, conduct at least 20 customer visits that include review and discussion of the organization's SHE performance metrics and pertinent safety issues.		<div style="display: flex; justify-content: space-between;"> <div>_____</div> <div>_____</div> </div> <div style="display: flex; justify-content: space-between;"> <div>Signature</div> <div>Date</div> </div>
Under appropriate supervision, prepare 3 complete formal drafts of MSFC Safety Bulletins.		<div style="display: flex; justify-content: space-between;"> <div>_____</div> <div>_____</div> </div> <div style="display: flex; justify-content: space-between;"> <div>Signature</div> <div>Date</div> </div>
Under appropriate supervision, deliver 2 safety presentations.		<div style="display: flex; justify-content: space-between;"> <div>_____</div> <div>_____</div> </div> <div style="display: flex; justify-content: space-between;"> <div>Signature</div> <div>Date</div> </div>

## **APPENDIX B: JOURNEYMAN Qualification Requirements**

Notes:

1. \*Under appropriate supervision – candidate shall work with another Safety Specialist that has reached the Journeyman level, or an individual that has the competency at or above this working level.
2. Candidates work with his/her Champion to identify specific applicable assignments. Department Manager can be consulted to ensure proposed assignments satisfy qualification requirements.

## **APPENDIX C: EXPERT Qualification Requirements**

### **C.1 Objective:**

This Appendix provides the qualification criteria for Safety and Occupational Health Specialists to be qualified at the Expert level, using the process described in the body of the Organization Instruction.

### **C.2 Prerequisites:**

Prior to beginning the process, the candidate is required to be qualified as a Journeyman Safety and Occupational Health Specialist per the requirements of Appendix B.

### **C.3 Years of Experience:**

The candidate is required to have at least 8-10 years of relevant discipline experience prior to becoming qualified at the Expert Level.

## APPENDIX C: EXPERT Qualification Requirements

<b>TRAINING CLASS REQUIREMENTS</b> Equivalent classes can be substituted with approval by the Discipline Champion.		<b>Champion SIGNATURE/ DATE COMPLETE</b>
Certified Safety Professional (CSP) Fundamentals Examination Study Course (NSTC 003)		_____ Signature Date
System Safety Workshop (NSTC 008)		_____ Signature Date
Human Factors in Accident Investigation (NSTC 012)		_____ Signature Date
System Safety Special Subjects (NSTC 015)		_____ Signature Date
Basic Risk Management and System Safety Practice - I (NSTC 020)		_____ Signature Date
Risk Management and Fault Tree Analysis – II (NSTC 021)		_____ Signature Date
Leading From the Inside Out (LFT 102) - (2 Days – MSFC)		_____ Signature Date
Conflict Management (CM) (2 Days – MSFC)		_____ Signature Date
Team Development in the Workforce (3 Days) (TDW)		_____ Signature Date
Influencing Others (1 Day – MSFC) (IFO)		_____ Signature Date

## APPENDIX C: EXPERT Qualification Requirements

REFERENCE MATERIALS Demonstrate comprehensive knowledge of contents as defined by the Discipline Champion		Champion SIGNATURE/ DATE COMPLETE
NPR 8715.1: NASA Safety & Health Handbook – Occupational Safety & Health Programs		_____ Signature                      date
NPR 8715.3: NASA Safety Manual		_____ Signature                      date
NPD 8710.2: NASA Safety & Health Policy		_____ Signature                      date
NPR 8621.1: NASA Procedural Requirements for Mishap Reporting, Investigation, and Recordkeeping		_____ Signature                      date
MPR 8715.1: Safety, Health & Environmental (SHE) Program		_____ Signature                      date
MWI 8715.1: Electrical Safety		_____ Signature                      date
MWI 8715.2: Lockout/Tagout Program		_____ Signature                      date
MWI 8715.3: Hazard Warning Signs & Barricades		_____ Signature                      date
MWI 8715.4: Personal Protective Equipment		_____ Signature                      date
MWI 8715.15: Ground Operations Safety Assessment and Risk Mitigation Program		_____ Signature                      date
MWI 8715.9: Occupational Safety Guidelines for MSFC Contractors		_____ Signature                      date
MWI 8715.10: Explosives, Propellant, & Pyrotechnics Program		_____ Signature                      date
MWI 8715.11: Fire Safety Program		_____ Signature                      date
MWI 8715.13: Safety Concerns Reporting System		_____ Signature                      date

## APPENDIX C: EXPERT Qualification Requirements

<b>REFERENCE MATERIALS</b> <b>Demonstrate comprehensive knowledge of</b> <b>contents as defined by the Discipline</b> <b>Champion</b>		<b>Champion SIGNATURE/ DATE COMPLETE</b>
MWI 8715.16: Supervisor's Safety Visits		_____ Signature date
MWI 3410.1: Personnel Certification Program		_____ Signature date
MWI 8621.1: Close Call and Mishap Reporting and Investigation Program		_____ Signature date
MWI 1280.5: Alert Processing		_____ Signature date
MWI 1700.3: NASA Safety Reporting Systems Corrective Action		_____ Signature date
MPR 1040.3: MSFC Emergency Plan		_____ Signature date
29 CFR 1910: Occupational Safety & Health Administration (OSHA): General Industry		_____ Signature date
29 CFR 1926: OSHA Construction		_____ Signature date
29 CFR 1960: OSHA Federal Programs		_____ Signature date
National Fire Codes (NFC)		_____ Signature date
American National Standards Institute (ANSI)		_____ Signature date

Notes:

1. Champion is responsible for identifying specific level of understanding required for each document. (See section 4.1).

## APPENDIX C: EXPERT Qualification Requirements

<b>ON THE JOB TRAINING</b> <b>Complete the following activities in any sequence (Note 1)</b>		<b>Champion SIGNATURE/ DATE COMPLETE</b>
Lead a team to enhance an Industrial Safety process.		<div style="display: flex; justify-content: space-between;"> <div>_____</div> <div>_____</div> </div> <div style="display: flex; justify-content: space-between;"> <div>Signature</div> <div>Date</div> </div>
Mentor other personnel in your discipline to help them improve their skills and expertise. This can be as a mentor to others in this PDRM process or as an informal coach in your daily work.		<div style="display: flex; justify-content: space-between;"> <div>_____</div> <div>_____</div> </div> <div style="display: flex; justify-content: space-between;"> <div>Signature</div> <div>Date</div> </div>
Be a proactive member of a Centerwide team.		<div style="display: flex; justify-content: space-between;"> <div>_____</div> <div>_____</div> </div> <div style="display: flex; justify-content: space-between;"> <div>Signature</div> <div>Date</div> </div>
Conduct, lead or contribute significantly to best practices studies within NASA, DOD and other Industries to achieve a world-class safety program.		<div style="display: flex; justify-content: space-between;"> <div>_____</div> <div>_____</div> </div> <div style="display: flex; justify-content: space-between;"> <div>Signature</div> <div>Date</div> </div>
Research occupational safety information to assure the best available methods and equipment are adopted to minimize the hazards in the work place.		<div style="display: flex; justify-content: space-between;"> <div>_____</div> <div>_____</div> </div> <div style="display: flex; justify-content: space-between;"> <div>Signature</div> <div>Date</div> </div>
Obtain relevant external professional qualification (e.g. Certified Safety Professional). (Highly recommended, but not required at this time).		<div style="display: flex; justify-content: space-between;"> <div>_____</div> <div>_____</div> </div> <div style="display: flex; justify-content: space-between;"> <div>Signature</div> <div>Date</div> </div>
Develop and implement new ideas or initiatives into the Center safety program.		<div style="display: flex; justify-content: space-between;"> <div>_____</div> <div>_____</div> </div> <div style="display: flex; justify-content: space-between;"> <div>Signature</div> <div>Date</div> </div>
Keep current with industry trends and other safety related data by reading periodicals and attending conferences.		<div style="display: flex; justify-content: space-between;"> <div>_____</div> <div>_____</div> </div> <div style="display: flex; justify-content: space-between;"> <div>Signature</div> <div>Date</div> </div>

Notes:

1. Candidates work with his/her Champion to identify specific applicable assignments. Department Manager can be consulted to ensure proposed assignments satisfy qualification requirements.



## APPENDIX D: Application for Qualification

This application is for (Check One):

\_\_\_ NOVICE Qualification  
Appendix A is Attached and approved

\_\_\_ JOURNEYMAN Qualification  
Appendix B is attached and approved

\_\_\_ EXPERT Qualification  
Appendix C is attached and approved

Name of Candidate: \_\_\_\_\_

Organization: \_\_\_\_\_

Building/Location: \_\_\_\_\_

Phone: \_\_\_\_\_ Email: \_\_\_\_\_

Signatures:

Candidate Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Champion: \_\_\_\_\_ Date: \_\_\_\_\_

Supervisor Signature: \_\_\_\_\_ Date: \_\_\_\_\_

S&MA Director: \_\_\_\_\_ Date: \_\_\_\_\_